UNITED STATES PATENT AND TRADEMARK OFFICE

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10/780,598	02/19/2004	Jun Ogawa	1046.1305	3384

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _19 January 2010_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1,3-8,10-15 and 17-21_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1, 3-8, 10-15, and 17-21_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail. Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1, 3-8, 10-15, and 17-21 are pending for examination.

Claims 2, 9, and 16 are cancelled.

Claims 1, 3-8, 10-15, and 17-21 are rejected.

Response to Arguments

1.   Applicant's arguments with respect to claims 1, 8, and 15 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3.   Claims rejected under 35 U.S.C. 103(a) as being unpatentable over US 6 961 783, Cook et al as applied to claims 1, 8, and 15 above, and further in view of US 2003/0172145, Nguyen.

4.   As per claims 1, 8, and 15, Cook teaches a name/address translation device, method, and computer-readable medium recording a program (abstract) comprising:

        a unit to receive a query about an IP (internet protocol) address corresponding to a name of a communication destination from a communication source (column 6, line 61 to column 7, line 7, where the device has multiple network interfaces);

        an identifying unit to identify, when that the communication source of the query belongs to either the private IP address network or the global IP address network based on an source IP address of the query, and to identify that a communication destination belongs to either the private IP address network or the global IP address network based

on the name of the communication destination included in the query (column 6, line 61

to column 7, line 7, where the device has multiple network interfaces, where the inside

interface may be connected to a private network, while the outside interface is

connected to a public network such as the Internet. In addition, each interface is fitted

appropriately for communication with media, logic, and memory to communicate with

the various media types. This logic and difference between internal and external private

and public networks allows the device to distinguish between the network types of the

source and destination by which interfaces the communications are associated with);

a judging unit to judge a combination of network types to which the

communication source and the communication destination respectively belong, based

on results of identification by the identifying unit (column 5, lines 23-34, where the

system access list may require device verification in order to respond with the requested

address. This verification serves to judge whether the requesting device is allowed

access to the destination address), and

a searching unit to search for the private IP address corresponding to the name

of the communication destination by using the database if both of the communication

source and the communication destination belong to the private IP address network, to

search for the global IP address corresponding to the name of the communication

destination by using the database if both of the communication source and the

communication destination belong to the global IP address network (column 5, lines 1-

10, where the DNS server resolves the IP address of the requested domain name for a

client requesting an Internet IP address. This, along with column 6, line 61 to column 7,

line 7, where the device has multiple network interfaces, where the inside interface may be connected to a private network, while the outside interface is connected to a public network such as the Internet, shows that the client on a private address may request the public IP address of a domain name from the domain name server); and

a sending unit to send the communication source the global IP address or the private IP address as a response to the query if the global IP address or the private IP address is obtained by the searching unit when the judging unit judges that it is allowable to give the response (column 5, lines 1-10, where the DNS server resolves the domain name into an IP address and forwards it to the requesting client, along with Figure 3, also column 7, lines 20-22, where the address is not returned if the source is not allowed to access the destination).

Cook does not expressly teach rejecting the query when it comes from a global network for a private network. Nguyen teaches a system for providing internet service comprising:

a first database used for searching for a private IP address corresponding to the name of the communication destination (paragraph 532, where the DNS may be a split DNS between internal and external domains);

a second database used for searching for a global IP address corresponding to the name of the communication destination (paragraph 532, where the DNS may be a split DNS between internal and external domains);

a judging unit to judge a combination of network types to which the communication source and the communication destination respectively belong, based

on results of identification (paragraph 532, where the DNS may be a split DNS between
internal and external domains);

a sending unit sending a response to a query when the searching unit searches
for a query, and to reject the query when the identifying information identifies that the
communication source belongs to a global network and the communication destination
belongs to a private network (paragraph 532, where the split DNS prevents internal host
names and addresses from being revealed over the internet).

It would have been obvious to one of ordinary skill in the art at the time of the invention
to utilize a split DNS such as taught by Nguyen in a DNS system such as taught by
Cook. Cook's system provides access control lists such that a DNS query may be
rejected based on access rights. Nguyen's system splits the DNS response units such
that external and internal addresses are preserved within their domains. Splitting
domains such as taught by Nguyen would prove beneficial in that private addresses
would not be sent over the global network, adding security (Nguyen, paragraph 532).

5.   As per claims 3, 10, and 17, Cook further teaches the sending unit invalidates
sending the response, if there is no application of which a use is permitted in a
communication between the communication source and the communication destination
when the identifying unit identifies that the communication source belongs to the private
network and the communication destination belongs to the global network (column 7,
lines 20-22, where the address is not returned if the source is not allowed to access the
destination).

6.   Claims 4-7, 11-14, and 18-21 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US 6 961 783, Cook et al and US 2003/0172145, Nguyen as applied

to claims 2, 9, and 16 above, and further in view of US 7 093 288, Hydrie et al

(previously cited).

7.   As per claims 4, 11, and 18, neither Cook nor Nguyen expressly teach a system

with firewall or packet filtering in conjunction with the DNS service. Hydrie teaches a

system of network communication containing a packet filtering system and method

comprising:

        a notifying unit configured to notify, when a response containing a second

terminal corresponding to the communication destination belonging to the second

network is given to a first terminal corresponding to the communication source

belonging to the first network, a routing device of passage information for letting a data

pass through that are forwarded between the first terminal and the second terminal, the

routing device receiving the data forwarded between the first network and the second

network and letting only the data with its passage permitted pass through, and effecting

an address translation between the first network and the second network (column 4,

lines 25-40, where the filters are accessed by the controller, and thus the controller

becomes aware of the passage rules, and either allows or denies communication

between devices).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to include a method of packet filtering such as that taught by Hydrie in the system of

Cook. Packet filtering allows a user to determine whether communication should be

allowed between devices based on a desired rule set (Hydrie, abstract). This would

have been beneficial in Cook's system, as it would have provided an additional layer of

protection to deny communication between devices, which is not allowed by the access

list.

8.   As per claims 5, 12, and 19, Hydrie further teaches

        wherein the notifying unit notifies the routing device of passage information

containing a first network address used in the first network that is virtually assigned to

the second terminal and a second network address that the second terminal uses on

the second network, so that the routing device translates, when a data transmitted from

the second terminal passes through, the second network address a source address

included in the data into the first network address (column 4, lines 42-50 show the

virtualization data, which includes a map of the virtual devices. This map contains

information on the communication source and destination, and also contains translation

information for translating the virtual addresses to real addresses), and

        wherein the sending unit sends a response containing the first network address

so that the first terminal adds the first network address as a destination address to a

data addressed to the second terminal to transmit the data addressed to the second

terminal, and that the routing device translates, when the data addressed to the second

terminal passes through, translates, when the data addressed to the second terminal

passes through, the destination address into the second network address (column 4,

lines 60-64 show that the network mediator uses the mapped addresses contained in

the virtualization data to convent the addresses and forwards the communication).

9.   As per claims 6, 13, and 20, Hydrie further teaches the notifying unit notifies the

routing device of the passage information further containing information about an

application of which the utilization is permitted in the communication between the first

terminal and the second terminal in order for the routing device to let only the data pass

through which is based on the application of which the utilization is permitted between

the first terminal and the second terminal (Hydrie teaches this limitation. Column 6, lines

40-50 show an example of the system working with multiple filters, where one filter

restricts the communication between two devices to a particular protocol).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to include a method of packet filtering such as that taught by Hydrie in the system of

Cook. Packet filtering allows a user to determine whether communication should be

allowed between devices based on a desired rule set (Hydrie, abstract). This would

have been beneficial in Cook's system, as it would have provided an additional layer of

protection to deny communication between devices, which is not allowed by the access

list. In particular, restricting access to a particular protocol would provide further

security, as even with a connection, a device would not have full control over another

device.

10.   As per claims 7, 14, and 21, Hydrie further teaches wherein the notifying unit

notifies, before the sending unit sends the address of the second terminal, the routing

device of the passage information (Hydrie teaches this limitation. Column 4, lines 25-40

show that the passage information is maintained in the filter list, thus providing a stable

source of the passage information which can be accessed at any time).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to include a method of packet filtering such as that taught by Hydrie in the system of

Cook. Packet filtering allows a user to determine whether communication should be

allowed between devices based on a desired rule set (Hydrie, abstract). This would

have been beneficial in Cook's system, as it would have provided an additional layer of

protection to deny communication between devices, which is not allowed by the access

list.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to THOMAS RICHARDSON whose telephone number is

(571) 270-1191. The examiner can normally be reached on Monday through Thursday,

8am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Vaughn can be reached on (571) 272-3922. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TR   /Yemane Mesfin/
                                                            Primary Examiner, Art Unit 2444